SME SCIENCE SENSE

INVENTOR PLANNING HYDROGEN-POWERED CAR

Los Angeles, 20 April — Sam Leslie Leach, the inventor of a controversial process that he contends can economically separate the hydrogen and oxygen in water, says he has refined his design and begun building a system that will be capable of running an automobile on hydrogen derived from water.

Mr Leach's invention has been the subject of both mystery and controversy since he said in 1976 that he had devised an economically efficient means of splitting water, a contention that promised a cheap source of hydrogen as a replacement for fossil fuel.

Mr Leach, a multimillionaire professional inventor who has several basic patents in the field of optics, has been trying to interest the federal government and industry in his concept for more than three years, but has been largely ignored.

For the most part, scientists have ridiculed the concept, arguing that it violated basic laws of physics. Any system of splitting water, they contend, has to consume more energy than it produces.

Positive Evaluation

Mr Leach has refused to discuss the details of his system or how it purportedly works. But last spring an innovation research centre at the University of Oregon, financed by the National Science Foundation, evaluated part of the technology over a period of two weeks and concluded that, based on its analysis, it did not violate the laws of physics or thermodynamics.

The centre said that the process appeared to be technically sound and have commercial potential, but its report did not dampen scepticism in the scientific community.

Two critics of the system, Howard Riese and Donald Bunker, both professors at the University of California, argued, for example, that it was impossible for such a system to work as Mr Leach contends because, in effect, it would be a "perpetual motion machine". The inventor denies such a characterisation.

In an interview, Mr Leach said that he had declined to make public any details

until he had protected his rights to the process. Last fall, he received a patent on some elements of the process. Last week, a second was issued by the United States Patent Office. After its issuance he agreed to give some details of how the system purportedly works.

How System Operates

In its simplest terms, he said, the process utilises a laser-like device to generate ultraviolet radiation that photochemically splits steam into oxygen and hydrogen. It then utilises the electrostatic forces that normally bind electrons and protons in water vapour (and which are released in the water-splitting action) to maintain the reaction.

In 1922, Niels Bohr, the Danish theoretical physicist, first defined the electrostatic forces that bind electrons and protons as "extranuclear" energy. Mr Leach's contention that he has found a way to use the energy in the way he describes is likely to evoke additional scepticism from other scientists.

But he asserts that the process he utilises to maintain the water-splitting action is identical with one observed by astronomers in energy interactions that occur in gaseous nebulae, the great masses of interstellar gas that absorb ultraviolet radiation from stars and re-emit it as visible light. The following is a more detailed account of how Mr Leach says the system works:

The reaction is started with an input of electrical energy from outside the system, from a battery or electric line. This energy is converted, by using an "optical pump" and other components, into large amounts of ultraviolet radiation of a specific wavelength that is precisely tailored to ionise hydrogen and oxygen molecules in the steam that has been fed into a tubular reaction chamber.

The chamber is flooded with the radiation. During the ionisation, electrons are momentarily liberated from their atoms and molecules.

Ionisation and Radiation

Microseconds later they are recaptured and recombined with the proton or nucleus of the atom. At this point, the energy that was required to ionise it reappears and radiates away.

This radiation then ionises another molecule. Very soon a chain reaction begins that involves millions of molecules and atoms.

The process's concept, Mr Leach said, manipulates the recombination of electrons and protons as hydrogen and oxygen instead of water vapour. Some of the hydrogen, he said, can be used to generate electricity to continue the initial input to the process and, in effect, be SELF-SUSTAINING AS LONG AS WATER IS



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PUMPED INTO THE SYSTEM.

In 1975, before he publicised his work, the Presley companies, a southern California home builder, acquired an option on the process from Mr Leach for use in home heating. The Securities and Exchange Commission investigated the company and alleged that it had issued false statements regarding its capabilities. Subsequently, Mr Leach reacquired the option for the same price Presley paid for it. Mr Leach asserted that he had demonstrated the validity of his theory in 11 experimental machines that split water into hydrogen and oxygen. He said that the machine now being built for use in an automobile was of a more sophisticated design and was intended to drive a 245-horsepower automobile.

A spokesman for a company that is assembling the device under a contract with Mr Leach said it was hoped the machine would be ready for testing in early summer.

Scientists have tried for more than a century to separate water into its two components, oxygen and hydrogen. Electrolysis, nuclear reactors and other means have been employed to do so, but every method has consumed far more energy that the hydrogen that was produced.

The availability of a cheap source of hydrogen would have immense implications for the world economy. Not only could hydrogen be used as a substitute for gasoline, but it would also be used as a replacement for home heating fuels and other energy sources.

other energy sources.
(Written 6.40 pm, 17 June 1993, by Tom.Ogle@p0.f21.n1010.z9.FIDONET.OR G in peg:alt.paranet.science)

UNUSUAL FLASHES RECORDED IN UPPER ATMOSPHERE

Unexpected, huge flashes of light in the upper atmosphere that may affect atmospheric ozone and present potential problems for high-altitude research planes, have been recorded by NASA researchers.

The flashes occurred above a severe thunderstorm in the Midwest on 8 July and were recorded on video taken with a special low-light-level, all-sky camera aboard NASA's DC-8 airborne laboratory based at Ames Research Center, California. The DC-8 flew alongside the line of thunderstorms at approximately 40,000 feet (12,192 metres).

Professors Davis Sentman and Eugene Wescott, from the Geophysical Institute of the University of Alaska, Fairbanks, released preliminary data this week.

Their video captured 19 examples of huge flashes of light that appear above storm clouds and extend into the upper atmosphere. Lasting less than 1/30th of a second, they are estimated to be 25 miles (40 km) high, 6 miles (9.66 km) wide, and greater than 240 cubic miles (1,000 cu. km) in volume. One flash was recorded for about every 300 cloud-to-ground lightning strikes.

Most flashes seemed to be disconnected from the storm clouds below. Their intensity is comparable to that of an aurora, but their short duration and faintness means they are only just visible even at night.

The Alaskan team is the first to collect systematic data on this little-known, barely studied phenomenon.

(Source: New Scientist, 16 October 1993)



ADAMS MOTOR DEVELOPMENTS

Robert Adams of Whakatane, New Zealand, inventor of the 100%-plus efficiency "Adams Pulsed Electric Motor Generator", has announced he has recently received confirmation from the United Kingdom of the filing for patents on his invention in a joint venture with Dr. Harold Aspden, an eminent UK ferromagnetics scientist.

Dr Aspden is currently promoting the development of the Adams Pulsed Electric Motor Generator in the UK, USA and Europe. He was IBM's European Patents Director for 19 years before taking early retirement in 1983 at the age of 55, expressly to work on magnetics research.

Mr Adams successfuly demonstrated several PEMGs before hundreds of people and local media at the Whakatane A&P Spring Show and Trade Fair at the beginning of October.

CURING CANCER WITH ULTRA RADIO FREQUENCIES

By Georges Lakhovsky, 1925

A new and important application of very short wavelengths is described in this article by one of the leading French scientists.

The new application of short wavelength oscillations described in this article is one of the most important ever found, and we are pleased to present to our readers this article by Mr Georges Lakhovsky, the well-known French scientist.

The experiments described were carried out in collaboration with several doctors and scientists of high standing and it seems, from results obtained, that the very high frequency treatments will play an important role in the future.

We shall publish in a later issue another article on this new system, together with the effects of ultra radio frequencies in the treatment of other diseases in human beings.

Since November 1923, I have published in various technical and radio publications several papers in which I explained my theory that the instinct or special feeling, which permits birds to direct themselves in space, is only the result of the emission and reception of rays by living beings.

While developing this theory, I explained how thoroughly I was convinced that science will discover, some day, not only the nature of microbes and the radiation which they produce, but also a method of killing disease bacilli within the human body by means of the proper radiations.

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The researches I have made by means of special apparatus have shown such results that I believe my theory to be correct. This theory is that life is born from radiations, kept going by radiation and suppressed by any accident producing the destruction of the oscillatory equilibrium, especially by the radiations of certain microbes, which suppress those of the weaker cells.

Before going any further in our reasoning, it is necessary, in order to present the facts to the uninitiated reader, to imagine what oscillations really are.

The motion of a pendulum will be used for this explanation. When a pendulum is displaced from the position of equilibrium, it moves back and forth producing what are known as synchronous oscillations, until the energy stored is entirely exhausted. By means of a motor, a spring or an electromagnet, it is possible to keep the motion of the pendulum of constant amplitude, producing undamped oscillations.

If, on the contrary, the source of power is removed, the oscillations die down and it is necessary not only to re-apply the power sustaining the oscillations, but also to furnish additional energy to start the pendulum in motion. This oscillation of a pendulum reproduces exactly what happens in the cells of a living being.

BODY COMPOSITION

Our organs are composed of cells formed of protoplasm containing various mineral matters and acids, such as iron, chloride, phosphorous, etc. It is by the combination of these elements that the cells detect outside waves and vibrate continuously at a very high frequency, probably higher than the period of X-rays or over all other vibrations known and measured today.

The amplitude of cell oscillations must reach a certain value in order that the organism be strong enough to repulse the destructive vibrations from certain microbes.

The astrophysicians are actually carrying out experiments of great interest on the existence of vibrations, which have been called penetration rays and of which the frequency is higher than that of X-rays and of the alpha, beta and gamma rays of radium.

Such rays, according to the theory, are produced by the Earth itself and some others come from outside space (reflected cosmic radiations are termed "noxious rays" —Vangard).

Accurate measurements have proven the correctness of this theory. Therefore, it is quite permissible to believe that these penetration rays, or at least some of them, pro-

duce the vibratory motion of living cells and consequently their life.

For instance, let us suppose a cell vibrates at a certain frequency and a microbe vibrates at a different frequency; the microbe begins to fight the cell through radiation, and sickness is started.

If the cell cannot repel the stronger vibrations and if the amplitude of its own vibration is forced to decrease, the microbe gains in amplitude and its vibrations begin to decrease and stop those of the cells, bringing on dangerous sickness or death.

If, on the contrary, the living cell is started vibrating with the proper amplitude by inside or outside causes, the oscillatory attack is repulsed. Such is my theory.

The problem is somewhat similar to the situation in which a rescuer finds himself when, coming to help a friend in a dangerous situation, finds himself fighting hand-to-hand against strong aggressors. The rescuer does not dare to fire his gun, fearing to harm his friend mixed up with the aggressors in the mêlée.

Similarly, microbes and healthy cells are all exposed to electric or radioactive action, which could be used to destroy the unwanted rays, and it is difficult to suppress them without harming or killing at the same time the cells which are to be treated. In fact, since Pasteur, scientists have been constantly searching for a means of destroying microbes.

The great difficulty with all methods found was that in destroying, the bacillus cell was attacked too. The experience gained in cancer and tuberculosis treated with radium, X-rays, or ultraviolet rays, shows how difficult is the world of the investigators.

called the Radio-Cellulo-Oscillator, with the firm belief that the cells vibrating at extremely short wavelengths would find their own in the Hertzian waves, which have the properties of producing extremely

short harmonics.

The cell with very weak vibrations, when placed in the field of multiple radiations, finds its own frequency and starts again to oscillate normally through the phenomenon of resonance.

This type of vibration is produced by the radio waves which I propose to use, and is harmless, unlike those of x-rays and radium. Their application, therefore, does not present any danger for the operator.

I exposed in front of my apparatus, during long periods, a certain number of microbes in culture, which developed themselves normally. I, myself, have never felt the effect of these ultra radio frequencies, although I remained for a great many days near the apparatus, during the treatment applied to the living cells.

It is only when two living beings such as a cell and a microbe are in contact, that the rays produced by the Radio-Cellulo-Oscillator have any direct effect upon cellular structure.

The experiments which I carried out at the Salpetrière Hospital in Paris, in the service and with the collaboration of Prof. Gosset, were made with plants inoculated with cancer, and the results were described in a paper presented on 26 July last year, before the Biological Society. The text of this paper follows:

"One knows that it is possible to produce by inoculation of *Bacterium tumefaciens* in plants, tumours similar to those of cancer in animals. One of us obtained experimen-

A NEW METHOD

The remedy, in my opinion, is not to kill the microbes in contact with the healthy cells, but to reinforce the oscillations of the cell either directly by reinforcing the radioactivity of the blood, or in producing on the cells a direct action by means of the proper rays.

During January 1924, I began to build, according to this theory, and with the purpose of therapeutic applications, an apparatus which I have



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tally by this method, a great number of tumors. These had various degrees of development. Some of them dry up partially, but do not die entirely until the entire plant or at least the limb bearing the tumour dies.

Even removed by surgical methods, these tumors grew again on the sick limb."

THE RADIO-CELLULO-OSCILLATOR

"We propose to describe in this paper the action of electromagnetic waves of very high frequency obtained by means of the Radio-Cellulo-Oscillator of Georges Lakhovsky.

This apparatus produces wavelengths of the order of two metres and less, corresponding to 150 million cycles per second.

A first plant was submitted to the effect of the radiation one month after being inoculated with cancer; at this time, small tumours of the size of a cherry stone were visible upon it. This plant was submitted to the rays twice, for three hours each time.

During the following days, the tumours continued to grow rapidly in the same ways as those on plants, which had not been submitted to the effect of radiations. However, 16 days after the first treatment, the tumours began to shrink and dry up.

A few days later, the tumours were entirely dried up and could be very easily detached from the limb of the plant by merely touching them.

The drying action of the radio frequency radiations is selective and affects only the sick part of the plant.

Even the inside sick tissues were destroyed, although they were next to healthy cells in the centre of the limb, showing that the radiations had not affected the healthy parts."

THE LENGTH OF TREATMENT

"Another plant was treated in the same way, except that it was exposed 11 times, for three hours each time, to the radiations of the oscillator.

Sixteen days after the first exposure, the tumours, which were rather large, began to shrink and dry up and were easily detached from the limb exactly as in the first case.

Again in this case, the healthy parts of the plant were not affected in the least.

A third plant exposed to the radiations for nine hours, that is, three treatments of three hours each, was cured in the same manner as the two others.

Sixteen plants, also inoculated with can-

cer, were left without treatment. They have tumours in full activity, several of which are very large.

These experiments show conclusively that plants inoculated with cancer can be treated and cured by means of the ultra radio frequency vibrations, whereas surgical treatment fails."

In conclusion, I wish to call the attention of the reader to the fact that I have obtained very conclusive results not only with a wavelength of two metres, but with longer and shorter wavelengths. The main thing is to produce the greatest number of harmonics possible.

Such are the results of my researches with plants. At the present time, similar experiments are being carried out with animals and it seems that the effect on cancerous animals is the same as on cancerous plants.

I am highly pleased to present my theory and the results of my work in a scientific review of the United States, this great country, which has always been in the lead in the fight against this terrible sickness, cancer, and whose sympathy and help I would greatly appreciate.

(Source: Radio News, 1925)

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